

1. What is CSS? How CSS is inserted in a HTML page? Illustrate with examples. (Refer notes)
2. What is XML Namespace? How it is used to avoid element name conflict in XML? Justify with an example.

It is a special type of reserved XML attribute that you place in an XML tag. It is a set of unique names which is used to avoid element name conflict in XML document. Attribute name must start with “xmlns:” which stands for XML namespace.

✓ Example of conflict:

1.xml

<class>

<name>-----</name>

</class>

2.Xml

<class>

<name>----- </name>

</class>

Here, a conflict occurs due to same element name

Now, XML Namespace is used to avoid the conflict

✓ Example of namespace:

1.xml

<?xml version="1.0">

<c1.class xmlns:c1=<http://www.abc.com/url1>>

<c1.name>Peter</c1.name>

</c1.class>

2.xml

<?xml version="1.0">

<c2.class xmlns:c2=<http://www.xyz.com/url2>>

<c2.name>Peter</c2.name>

</c2.class>

Now ,there will be no conflict due to namespace

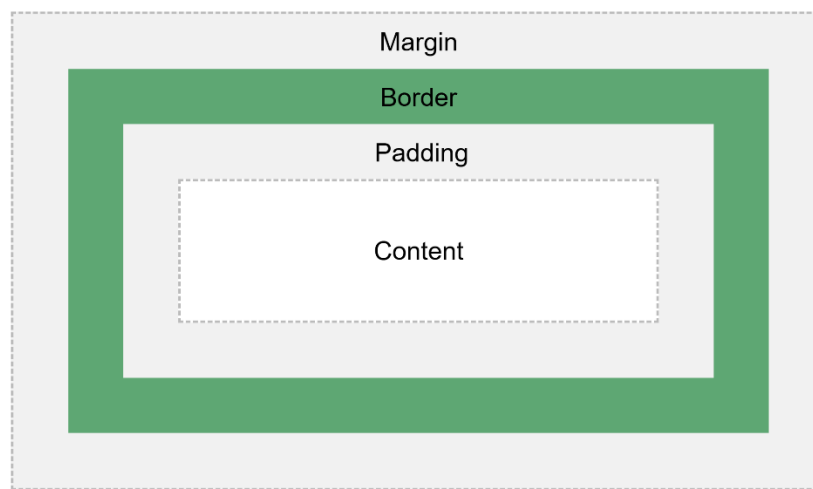
3. Differentiate between Web 1.0 and Web 2.0.

| Web 1.0 | Web 2.0 |
|--|--|
| 1. Typically read only | 1. Strongly read-write |
| 2. Owned content | 2. Shared content |
| 3. Nature: static web | 3. Nature: Dynamic web |
| 4. Technology used: HTMLSimple
CSS | 4. Technology used:
HTML5,CSS3,Angular,React
framework |
| 5. Centralised control | 5. Decentralized control |
| 6. One-way communication from
the server to the user. | 6. Two-way communication between
users and servers. |

4. Describe client server architecture with its types.(refer notes: 1 tier ,2 tier ,3 tier and n-tier)
5. What is CSS Box Model? Write CSS style for demonstrating CSS Box Model.

CSS Box model:

CSS is used for the layout and presentation of the HTML document. The CSS box model is a fundamental concept that defines how the element's dimensions and spacing are calculated. The box model treats every HTML element as a rectangular box consisting of **content, padding, border, and margin.**



CSS style for demonstrating CSS Box Model:

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>CSS-Box Model Example</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <div class="box-model-demo">This is a CSS Box Model example.</div>
</body>
</html>
```

Save below code styles.css

```
.box-model-demo {
  width: 250px;
  height: 100px;
  padding: 20px;
  border: 5px solid #007BFF;
  margin: 20px;
  background-color: #f0f8ff;
  color: #000;
  font-size: 16px;
  text-align: center;
  line-height: 100px;
}
```

6. Discuss the use of XQuery and XPath in XML.

XQuery is ***an expression*** language for querying XML data. It was designed to query XML data.

XQuery can be used to

- Extract information to use in a web service
- Generate summary reports
- transform XML data to XHTML
- Search web documents to relevant information

XPath (the XML Path language) is a language for finding information in an XML document.

The use of XPath in xml are:

- Node navigation
- Filtering
- Attribute selection
- Counting nodes and data validation etc.

Today XPath expressions can also be used in JavaScript, Java, XML Schema, PHP, Python, C and C++, and lots of other languages.

7. **Write html script to demonstrate use of main and article tags**

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Main and Article Tags Example</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      line-height: 1.6;
      margin: 0;
      padding: 0;
    }
    header {
      background: #007BFF;
      color: #fff;
      padding: 10px 20px;
      text-align: center;
    }
    main {
      padding: 20px;
```

```

    }
    article {
        margin-bottom: 20px;
        padding: 15px;
        border: 1px solid #ddd;
        border-radius: 5px;
        background: #f9f9f9;
    }
    article h2 {
        margin-top: 0;
        color: #333;
    }
    footer {
        text-align: center;
        padding: 10px;
        background: #007BFF;
        color: #fff;
    }
</style>
</head>
<body>
    <header>
        <h1>Welcome to MMAMC</h1>
    </header>
    <main>
        <article>
            <h2>Understanding HTML5 Semantic Elements</h2>
            <p>HTML5 introduced several semantic elements, such as <code>&lt;main&gt;</code>,
            <code>&lt;article&gt;</code>, <code>&lt;header&gt;</code>, and
            <code>&lt;footer&gt;</code>, to help structure content better.</p>
        </article>
        <article>
            <h2>Why Use the <code>&lt;article&gt;</code> Tag?</h2>
            <p>The <code>&lt;article&gt;</code> tag is used to represent self-contained content,
            such as blog posts, news articles, or forum posts, that could be distributed or reused
            independently.</p>
        </article>
    </main>
    <footer>
        <p>&copy; 2024 My Blog. All Rights Reserved.</p>
    </footer>
</body>
</html>

```